

an idle state and will send no more responses to the master during the current "bit-by-bit" exchange. This allows tag1 to continue its exchange with the master and complete its identification process, as indicated by the transmitted pulse 40 from tag1 during the bit 21 window. Regardless of the number of tags responding during a given exchange after a bit-by-bit command, only one tag, in this case tag1, will succeed in transmitting its unique 24-bit binary identification number to the master after 24 time windows. The present invention also ensures that one tag will actually succeed during every exchange after a bit-by-bit command, collision notwithstanding.

In the drawings:

New formal drawings are being submitted herewith, with a correction in Fig. 2 as shown in the attached redlined copy.

In the claims:

Replace claims 1, 10, 19 and 20 with:

1. A system of communicating between a master communication device and at least one slave communication device for determining if said at least one slave is within a field of coverage and for identifying said slave, the system comprising:

a master communication device having transmitting and receiving means, said master establishing a field of coverage and

initiating communications with slave communication devices within said field of coverage;

at least one slave communication device having transmitting and receiving means and a binary identification number, said at least one slave communicating with said master to provide said binary identification number; and

said master sending a command to said at least one slave for said at least one slave to provide said binary identification number, and

said at least one slave receiving said command and providing information representative of bits of said unique binary identification number to said master in a bit-by-bit manner, said slave continuing transmission of said information only during receipt of acknowledgments of each bit from said master.

10. In a communication system having a master communication device and at least one slave communication device, a method for determining if said at least one slave is within a field of coverage and for identifying said at least one slave, said method comprising the steps of:

establishing a field of coverage;

determining if said at least one slave is within said field of coverage, said at least one slave having a binary identification number;

sending a command requesting said binary identification number of said at least one slave; and

identifying said at least one slave via transmission of information representative of bits of said unique binary identification number to said master in a bit-by-bit manner, said slave continuing transmission of said information only during receipt of acknowledgments of each bit from said master.

19. A radio frequency (RF) communication system for determining if at least one object is within a field of coverage and for identifying said object, said system comprising:

a RF communication device having a transmitter and a receiver, said device generating a RF transmission to said field of coverage and transmitting a request signal to determine if there are any objects within said field of coverage;

a tag capable of being affixed to said at least one object, said tag having a transmitter, a receiver and a binary identification number, and said tag receiving said request signal and transmitting a response signal to said communication device to provide said binary identification number to said device in a bit-by-bit manner, continuing transmission of information only

during receipt of acknowledgments of each bit from said device;  
and

said device receiving transmissions that are  
representative of bits of said unique binary identification  
number and acknowledging said transmissions in a bit-by-bit  
manner.

20. A method for communicating in a radio frequency  
(RF) communication system for determining if at least one object  
is within a field of coverage and for identifying said at least  
one object, said method comprising the steps of;

generating a RF transmission to said field of coverage  
and transmitting a request to determine if there are any objects  
within said field of coverage;

affixing a tag to at least one object, said tag  
receiving said request and transmitting a response to provide  
said binary identification number in a bit-by-bit manner,  
continuing transmission of information only during receipt of  
acknowledgments of each bit; and

receiving transmissions representative of bits of said  
unique binary identification number and acknowledging said  
transmissions in a bit-by-bit manner.